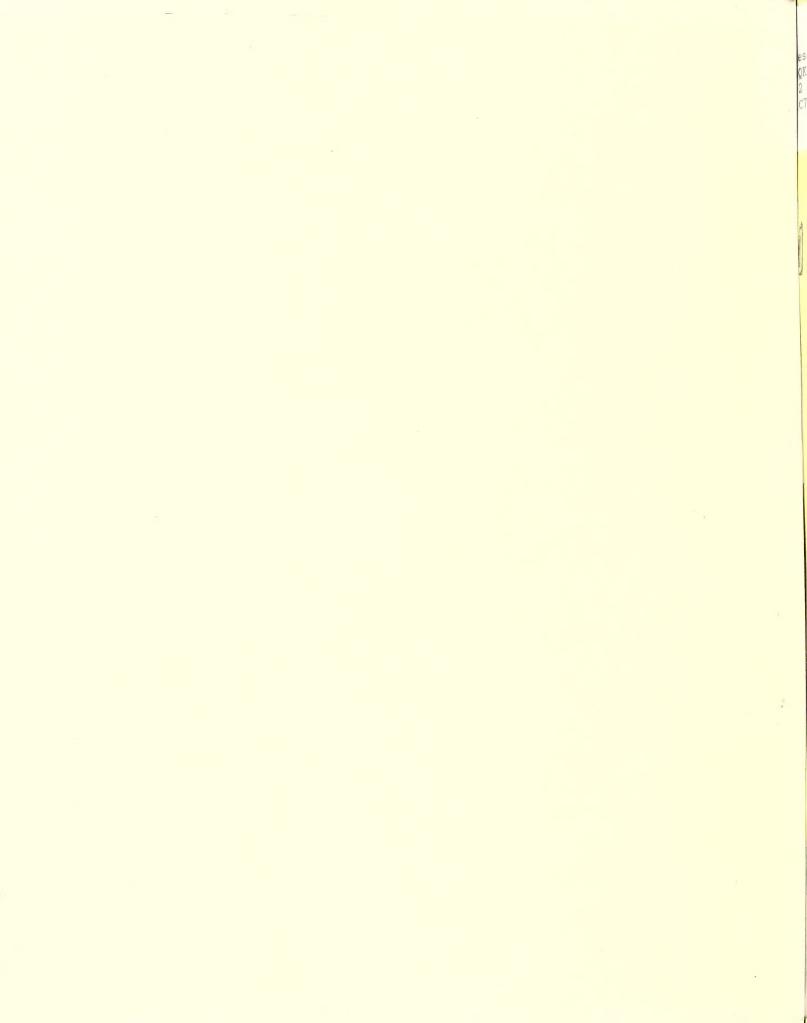
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Report of

The Middle Atlantic

Uniform Preliminary Soybean Tests - 1986

Compiled by

P. B. Cregan and D. J. Thibeau
Nitrogen Fixation and Soybean Genetics Laboratory
Plant Physiology Institute
Agricultural Research Service
Beltsville Agricultural Research Center
Beltsville, Maryland 20705

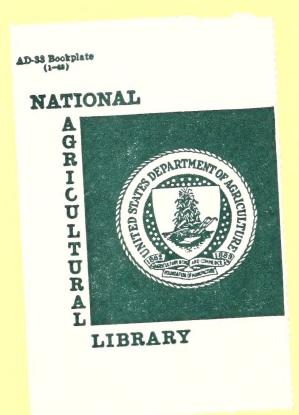


TABLE OF CONTENTS

	Page
Middle Atlantic Uniform Test Participants	. 1
Methods	. 2
Preliminary Test III-IV (Tables`1-5)	4
Preliminary Test IVS (Tables 6-10)	. 9
Preliminary Test V (Tables 11-15)	14
Preliminary Late Plant Test (Tables 16-20)	19

ACKNOWLEDGEMENTS

The cooperation of James F. Cavins, Research Leader, Analytical Chemistry Support Unit, Northern Regional Research Center, Peoria, Illinois, in the analysies of test samples for protein and oil content of the seeds is gratefully acknowledged.

The assistance of Harriet A. Kilby, Plant Physiology Institute Office, BARC-West, Beltsville, MD who typed the tables is also gratefully acknowledged.

U, S. DEPT, OF AUGUSTURI NATIONAL AGRICULTURAL LIBRAR

JUN 1 4 1988

CATALOGING = PREP

		2
		-

MIDDLE ATLANTIC PRELIMINARY UNIFORM SOYBEAN TEST PARTICIPANTS

J. R. Justin
Department of Soils and Farm Crops
Cook College, Box 231
New Brunswick, New Jersey 08903
(201) 932-9872

J. O. Yocum Southeastern Field Research Laboratory Landisville, Pennsylvania 17538 (717) 653-4728

E. L. Wisk University Substation Delaware Agricultural Experiment Station Georgetown, Delaware 19947 (302) 856-5254

W. J. Kenworthy and V. R. Pantalone Department of Agronomy University of Maryland College Park, Maryland 20742 (301) 454-4695 Lewis H. Smith Wye Institute Queenstown, MD 21658 (301) 827-7388

P. B. Cregan and D. J. Thibeau Nitrogen Fixation and Soybean Genetics Lab Plant Physiology Institute, USDA-ARS Range 1, GH 19, BARC-West Beltsville, Maryland (301) 344-3070, 344-4208

G. R. Buss
Department of Agronomy
Virginia Agricultural Experiment
Station
Blacksburg, Virginia 24061
(703) 961-6483

D. Starner Piedmont Research Station Orange, Virginia 22960 (703) 672-2660

H. M. Camper, Jr.
Eastern Virginia Research Station
Warsaw, Virginia 22572
(804) 333-4262



MIDDLE ATLANTIC SOYBEAN PRELIMINARY UNIFORM SOYBEAN TESTS - 1986

METHODS

<u>Killing Frost</u>: If it affected any strains before maturity, it is so stated.

<u>Plot Size</u>: 4 rows x 20 feet planted (3 rows x 20 feet at Orange and Warsaw, VA), 2 rows x 16 feet harvested (1 row x 16 feet at Orange and Warsaw, VA).

The following data are reported as the mean of 2 or 3 replications:

<u>Yield</u> is measured after the seeds have been dried to a unifiorm moisture content and is recorded in bushels per acre to the nearest tenth.

Maturity is the date when approximately 95% of the pods are ripe. Maturity is expressed in days after August 31.

Lodging is rated at maturity according to the following scores:

- 1. Almost all plants erect
- 2. All plants leaning slightly or a few plants down
- 3. All plants leaning moderately (45°), or 25% to 50% of the plants down
- 4. All plants leaning considerably, or 50% to 80% of the plants down
- 5. Almost all plants down

<u>Height</u> is the average length of plants from the ground to the tip of the main stem at the time of maturity and is reported to the nearest inch.

<u>Shattering</u>, if observed, is rated at a specified length of time after maturity as percent of the seed shattered or on a scale as follows:

- 1. No shattering
- 1% to 10% shattered
- 3. 10% to 25% shattered
- 4. 25% to 50% shattered
- 5. Over 50% shattered

<u>Seed Quality</u> is rated according to the following scores considering the amount and degree of wrinkling, defective seed coat, greenishness, and moldy or rotten seeds. (Damage from threshing or handling is not considered, nor are seed pigment and mottling, which may be noted separately.).



- 1. Very good
- 2. Good
- 3. Fair
- 4. Poor
- 5. Very poor

<u>Seed Size</u> is the weight per 100 seeds in grams to the nearest tenth.

Statistical Analysis utilized the Least Significant Difference Test. In analyses across environments the soybean genotype x environment mean square was used to test genotype differences and to calculate the Least Significant Difference.

Table 1. 1986 Mid-Atlantic Maturity Group III-IV Test

Entry No.	Strain	Pedigree
1	Pella ·	
2	Sparks	
3	Fayette	•
4	CX797-21	High protein check
5	V82-885	Essex x V71-793
6	Md84C-0502	Essex x A75-302005
7	Md84C-0897	Union x Md71-1643-82
8	Md84C-0900	Union x Md71-1643-82
9	Md84C-1409	K1024 x Md70-1626-67
10	Md84C-1749	K1024 x Md70-1626-67
11	Md84L-1399	Hobbit x L78-2205 (fasciated)
12	Md84L-4817	Hobbit x L78-2246
13	Md84K-5661	Douglas x Franklin (SCN res.)
14	Md84K-5642	Douglas x Franklin (SCN res.)
15	V84-1886	Epps x L77-994 (SCN res.)
16	V84-579	Will x Md71-583
17	V84-616	Delmar x Will
18	V83-1461	Bedford x L77-994
19	V83-359	York x (SRF400 x PI 81038)
20	V83-5045	Ms2 population

6 locations: Adelphia, NJ; Landisville, PA; Georgetown, DE; Queenstown, MD; Orange, VA; Warsaw, VA

Two replications x 4-row plots, 20' row length and 30" row spacing at Adelphia, Landisville, Georgetown, and Queenstown; 3-row plots with 20' row length and 36" row spacing at Warsaw and Orange; 160 seeds/row.

		,	
		•	

Mean performance of strains in Middle Atlantic Group III-IV tests evaluated at six locations in 1986.1/ Table 2.

			27.1	Tanc Hates	n			peac	Iraits		
	Yield	14 2/	Maturity (Davs after	Lodging (score)	Height (inches)	Quality (score)	3/ Size (9/100)	Protein (%)	0i1 5/	Purple	Mottled 4/
Strain	(bu/a)	Rank					- 1			(%)	(%)
Pella	47.0	12	28.5	1.8	2	2.6	22.0	39.3	20.5	2.9	7.5
Sparks	51.3	2	33.5	2.4	43.3	2.1	19.9	38.8	19.5	1.6	3.7
Fayette	40.44	15	30.4	2.5	∞	2.1	17.7	41.9	19.2	1.0	5.2
CX797-21	38.3	19	28.7	2.6	∞	1.9	19.4	46.8	15.4	0.7	16.3
V82-885	48.2	∞	35.5		5	1.7	14.2	42.8	17.9	0.1	11.8
Md84C-0502	51.9	1	35.3		∞	1.8	17.0	42.5	19.0	7.0	0.3
Md84C-0897	9°05	Э	35.3		4	1.7	17.6	40.8	18.0	9.0	0.2
Md84C-0900	6.64	7	33.2		41.5	1.9	18.4	40.5	19.1	1.0	0.2
Md84C-1409	47.4	6	35.9		6	2.7	21.7	40.0	19.6	13.3	0.0
Md84C-1749	50.5	7	31.9		9	2.4	22.2	39.2	20.9	10.1	1.0
Md84L-1399	29.5	20	32.5	1.5	\vdash	2.0	17.5	39.8	20.3	7.0	2.5
Md84L-4817	44.2	16	33.2		30.7	1.7	16.7	0.04	20.0	1.0	0.5
Md84K-5661	50.1	5	34.4	2.6	2	2.4	17.3	42.1	18.5		4.2
Md84K-5642	45.3	14	35.0	3.0	∞	2.4	18.2	38.9	20.3		
V84-1886	43.2	17	35.8	2.7		1.8	15.7	43.2	18.4		
V84-579	50.0	9	34.4	2.3	30.5	1.9	17.3	40.2	19.2	0 . 7	2.2
V84-616	6.94	13	31.7	2.1	33.1	2.0	17.8	40.7	20.0		
V83-1461	47.2	11	34.5	2.9	36.7	2.0	16.0	41.4	17.9	0.0	
V83-359		18	36.8	2.4	40.2	1.6	15.0	0.44	16.3		
V83-5045	47.3	10	35.1	1.5	27.4	1.7	17.5	41.8	18.5		

Data from Adelphia, Landisville, Georgetown, Queenstown, Orange, and Warsaw. 1

Data from Landisville, Georgetown, Queenstown, Orange, and Warsaw. 2/

 $[\]overline{3}/$ Data from Landisville, Queenstown, Orange, and Warsaw.

^{4/} Data from Queenstown, Orange, and Warsaw.

^{5/} Data from Queenstown.

Table 3. Seed yields (bu/a) and maturity (days after August 31) of strains in Hiddle Atlantic Group III-IV tests evaluated at six locations in 1986.

Strain Landiaville Georgetour Queenstoun Orange Warsav Strain Adelphia Landiaville Georgetour Queenstour Orange Warsaw Strain Adelphia Landiaville Georgetour Orange Warsaw Strain Adelphia Landia	Strain mean Ph PB Confection Queenstoun Orange Warsaw mean Ph PB DE				Yie	Yield						Maturity			
Perlia 47.0 41.9 41.7 51.5 45.0 52.2 28.5 31.5 36.0 45.0 31.0 21.5 Sparka 51.3 31.4 51.3 60.5 50.7 31.5 36.0 45.0 31.0 24.0 Sparka 51.3 31.4 55.3 60.5 50.7 31.5 36.0 45.0 31.0 24.0 CR39-21 38.3 31.3 31.6 47.8 45.1 50.3 31.0 24.0 V02-885 48.2 31.3 34.0 34.0 31.0 31.0 31.0 22.0 V02-885 48.2 31.2 46.3 35.3 34.0 34.0 31.0 <th< th=""><th>Partia 47.0 41.9 41.7 51.5 66.5 52.2 28.5 131.5 181.0 21.5 21.5 51.5 67.0 52.2 28.5 131.5 181.0 21.5 21.5 51.5 51.5 51.5 51.5 181.0</th><th>Strain</th><th>Strain</th><th></th><th>Georgetown</th><th></th><th>Orange VA</th><th>Warsaw VA</th><th>Strain</th><th>Adelphia</th><th>Landisville PA</th><th>Georgetown DE</th><th></th><th>Orange</th><th>Warsaw</th></th<>	Partia 47.0 41.9 41.7 51.5 66.5 52.2 28.5 131.5 181.0 21.5 21.5 51.5 67.0 52.2 28.5 131.5 181.0 21.5 21.5 51.5 51.5 51.5 51.5 181.0	Strain	Strain		Georgetown		Orange VA	Warsaw VA	Strain	Adelphia	Landisville PA	Georgetown DE		Orange	Warsaw
Sparte \$1.3 \$1.4 \$5.3 \$60.5 \$60.7 \$13.5 \$16.0 \$45.0 \$24.0 Raylete \$44.4 \$15.0 \$47.6 \$47.6 \$47.0 \$47	Fayerte (4.4) 31.0 31.4 31.4 31.4 31.4 31.4 31.4 31.4 31.5 31.4 31.5 3	Pella	47.0	41.9	41.7	51.5	45.0	52.2	28.5	33.5	38.0	31.0	21.5	23.5	24.5
Fayette 44,4 15.0 41.6 47.8 45.1 50.3 10.4 15.0 40.0 132.0 23.0 CX797-21 18.3 13.3 40.5 14.7 14.2 15.1 19.2 46.5 15.6 49.3 15.5 18.5 19.0 132.0 22.0 CX797-21 18.3 13.3 13.3 13.3 13.3 13.3 13.3 13.	Fayerer 44, 45, 15, 0 43,6 47,8 45,1 50,3 30,4 13,0 40,0 312,0 22,0 22,0 27,9 28,1 13,1 13,1 13,1 14,1 15,2 14,1 15,1 15,1 14,1 15,1 15,1 14,1 15,1 15	Sparks	51.3	38.7	51.4	55.3	60.5	50.7	33.5	36.0	45.0	38.0	24.0	29.5	31.0
1.5 1.5	CCC797-21 38.3 31.3 39.0 41.7 39.2 40.5 28.7 34.0 39.0 31.0 22.0 23.5 44.0 45.5 31.0 31.0 22.0 23.5 44.0 46.5 50.6 45.6 55.6 49.3 31.3 39.0 41.7 31.0 32.5 31.0 31.0 32.5 44.0 46.5 50.6 45.6 55.6 49.3 31.3 39.0 42.5 31.0 31.0 31.0 31.0 31.0 31.0 44.5 51.2 45.5 51.0 51.0 46.5 31.0 46.5 45.6 51.0 40.0 51.0 46.5 31.0 46.5 31.0 46.5 45.0 40.0 31.0 31.0 31.0 31.0 44.2 31.0 44.0 45.2 45.2 45.2 56.0 51.9 48.7 31.3 39.0 42.5 39.0 31.0 31.0 31.0 44.2 31.0 44.0 45.2 45.2 45.2 56.0 51.9 48.7 31.3 39.0 44.0 39.0 39.0 30.0 31.0 31.0 44.2 31.0 44.2 45.2 45.2 45.2 56.0 51.9 48.7 31.3 31.2 34.0 39.0 39.0 39.0 30.0 31.0 31.0 44.2 31.0 44.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2	Fayette	4.44	35.0	43.6	47.8	45.1	50.3	30.4	35.0	40.0	32.0	23.0	27.5	25.5
98.2 48.2 32.8 55.3 52.1 35.5 38.5 38.5 39.0 31.0 98.4 46.5 56.6 56.6 55.6 49.3 35.3 36.0 36.0 31	VBS-E85 48.2 32.8 48.1 35.3 32.1 48.5 39.0 31.0 31.5 31.0 42.5 31.5 31.5 31.0 42.5 31.5 31.5 31.5 31.0 42.5 31.0 31.5 31.5 44.0 31.0 31.5 31.0 42.5 31.0 31.1 44.0 31.0 31.0 31.0 31.5 31.0	CX797-21	38.3	31.3	39.0	41.7	39.2	40.5	28.7	34.0	39.0	31.0	22.0	23.5	24.0
M6464C-0502 51.9 46.5 50.6 56.6 55.6 49.3 35.3 39.0 42.5 38.0 29.0 M646C-0502 51.9 46.6 55.6 51.8 49.8 35.3 36.5 40.0 31.0 M646C-0897 50.6 45.2 55.7 51.8 49.8 35.3 36.5 31.0 <td> Mark</td> <td>V82-885</td> <td>48.2</td> <td>32.8</td> <td>48.1</td> <td>52.8</td> <td>55.3</td> <td>52.1</td> <td>35.5</td> <td>38.5</td> <td>45.0</td> <td>39.0</td> <td>31.0</td> <td>32.5</td> <td>29.0</td>	Mark	V82-885	48.2	32.8	48.1	52.8	55.3	52.1	35.5	38.5	45.0	39.0	31.0	32.5	29.0
Hd44C-0897 50.6 45.6 55.2 55.7 51.8 49.8 35.3 36.5 44.0 40.0 31.0 Hd44C-0897 50.6 45.5 55.0 51.9 48.7 31.3 36.5 44.0 40.0 31.0 Hd44C-0809 49.9 45.2 45.5 56.0 51.9 48.7 31.2 31.0 45.0 30.0 30.0 30.0 40.4 35.0 41.7 59.2 55.1 60.0 50.1 31.9 31.5 31.0 45.0 40.0 31.0 30.0 Hd44C-1409 50.5 35.7 50.6 55.1 60.0 50.1 31.9 31.5 31.0 45.0 31.0 45.0 31.0 45.0 31.0 45.0 31.0 45.0 31.0 45.1 50.4 46.4 31.2 41.0 45.0 41.5 55.4 45.4 31.1 50.4 45.1 50.4 46.4 31.2 41.0 45.0 31.0 25.0 Hd44K-5641 50.1 34.2 40.0 55.4 46.1 31.2 41.0 45.0 31.0 50.4 45.1 50.4 46.1 31.0 45.0 31.0 31.0 31.0 50.4 45.1 50.4 46.1 31.1 45.1 45.1 46.0 47.9 46.1 31.1 45.1 45.1 46.0 47.9 46.1 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	H846C-1099 50.6 45.6 45.6 45.5 53.7 51.8 49.8 35.3 16.5 44.0 40.0 311.0 311.0 H846C-0997 50.6 45.5 55.0 51.0 51.0 48.7 35.2 35.9 31.0 45.0 40.0 31.0 31.0 31.0 H846C-1090 47.4 35.0 41.7 59.2 51.7 46.6 35.0 37.0 45.0 40.0 31.0 31.0 31.0 31.0 41.0 45.0 40.0 45.2 41.0 45.0 40.0 31.0 31.0 31.0 31.0 41.0 45.0 40.0 31.0 31.0 31.0 31.0 45.0 40.0 31.0 31.0 31.0 31.0 45.0 40.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 3	M484C-0502	51.9	46.5	50.6	9.95	55.6	49.3	35.3	39.0	42.5	38.0	29.0	32.5	32.0
Hd8AC-0900 49.9 45.2 45.5 56.0 51.9 48.7 33.2 34.0 39.0 34.0 30.0 Hd8AC-0900 49.9 47.4 35.0 41.7 59.2 51.7 46.6 33.9 37.0 45.0 50.0 31.0 Hd8AC-1409 47.4 35.0 41.7 59.2 51.7 46.6 30.1 31.5 37.0 39.0 34.0 25.0 Hd8AC-1899 50.5 21.2 43.0 34.2 22.8 33.3 31.5 37.0 39.0 39.0 26.0 Hd8AC-1897 44.2 35.4 45.3 50.4 46.4 31.2 31.2 43.0 39.0 39.0 30.0 25.0 Hd8AC-561 50.1 34.2 45.3 50.4 46.4 31.2 43.0 45.0 31.0 45.0 31.0 45.0 31.0 45.1 46.0 40.0 31.0 45.0 31.0 45.0 31.0 45.0 31.0 45.0 31.0 45.1 46.0 40.0 31.0 45.1 46.0 40.0 47.9 46.7 31.8 43.5 47.0 31.0 30.0 484-516 46.9 30.0 45.3 55.8 56.0 55.8 49.3 31.7 47.0 31.0 31.0 30.0 484-516 46.9 30.0 47.9 46.7 31.0 36.8 31.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 45.2 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 46.0 40.0 31.0 31.0 45.1 31.0 31.0 45.1 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	H846C-1090 49.9 45.2 45.5 56.0 51.9 48.7 33.2 34.0 39.0 34.0 31.0 31.0 41.8 4884C-2090 49.9 45.2 45.5 56.0 51.9 46.6 31.2 31.2 31.2 34.0 39.0 34.0 31.0 31.1 41.8 46.1 41.2 51.7 46.6 51.9 41.2 31.2 31.2 31.2 31.2 31.2 31.2 31.0 31.2 31.3 31.3 31.3 31.3 31.0 31.0 31.0 31.0	M484C-0897	9.05	45.6	53.2	53.7	51.8	8.64	35.3	36.5	0.44	0.04	31.0	31.0	31.5
Hd84C-1409 47.4 35.0 41.7 59.2 51.7 46.6 35.9 37.0 45.0 40.0 31.0 Hd84C-1409 50.5 35.7 50.6 55.1 60.0 50.1 31.9 31.5 31.0 31.0 50.5 31.0 Hd84C-1749 50.5 21.2 40.0 34.2 22.8 33.3 31.9 31.5 31.0 31.0 25.0 Hd84C-1749 50.5 21.2 40.0 34.2 22.8 33.3 31.3 31.9 31.0 25.0 Hd84C-1817 44.2 35.4 42.9 45.3 50.4 46.4 45.4 31.2 43.0 45.0 31.0 25.0 Hd84C-561 50.1 34.2 45.3 31.1 45.1 46.0 45.3 52.5 34.4 35.5 41.5 40.0 29.0 Hd84C-561 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.5 41.5 40.0 29.0 Hd84C-561 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.0 31.5 47.0 31.0 20.0 V84-186 43.2 31.1 45.0 45.7 57.5 59.0 55.8 34.4 38.0 31.5 47.0 31.0 31.0 V84-519 50.0 29.8 48.3 57.5 59.0 55.8 31.7 36.5 31.0 31.0 31.0 31.0 45.1 45.0 57.5 50.1 45.6 49.3 31.7 36.5 31.0 31.0 31.0 31.0 45.1 51.2 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0	H8464-1949 47.4 35.0 41.7 59.2 51.7 46.6 35.9 37.0 45.0 40.0 31.0 33.5 H4464-1949 50.5 31.7 50.5 H4464-1949 50.1 31.2 43.0 45.2 50.6 46.4 46.4 46.4 46.4 46.4 46.4 46.4 4	M484C-0900	49.9	45.2	45.5	26.0	51.9	48.7	33.2	34.0	39.0	34.0	30.0	31.0	31.5
Hd84C-1749 50.5 35.7 50.6 56.1 60.0 50.1 31.9 31.5 38.0 34.0 25.0 Hd84C-1749 20.5 21.2 43.0 34.2 22.8 31.3 31.3 31.5 37.0 39.0 25.0 Hd84L-1899 29.5 21.2 43.0 43.0 43.2 46.4 46.4 46.4 46.4 46.3 31.0 45.0 31.0 25.0 Hd84K-5661 50.1 34.2 42.9 45.3 50.4 46.4 48.3 31.2 43.0 45.0 31.0 25.0 Hd84K-5661 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.5 41.5 40.0 29.0 Hd84K-5642 45.3 31.1 46.0 46.0 46.7 35.8 34.4 35.8 47.0 39.0 30.0 Hd84K-5642 45.3 31.1 46.0 46.0 46.0 46.0 46.0 30.0 46.1 31.1 45.1 46.0 46.0 49.3 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	Hd44C-1749 50.5 35.7 50.6 56.1 60.0 50.1 31.9 31.5 38.0 34.0 25.0 30.5 Hd44C-1749 50.5 31.2 43.0 34.2 22.8 33.3 31.3 31.5 31.0 39.0 26.0 25.5 Hd84C-1899 29.5 21.2 42.9 42.9 46.4 66.4 31.2 32.4 46.4 46.4 31.2 31.1 50.1 31.1 50.4 55.4 58.5 52.5 34.0 31.5 47.0 31.0 25.0 27.0 Hd84C-564 43.2 31.1 50.4 45.2 50.4 46.4 48.3 35.0 31.5 47.0 31.0 25.0 30.5 Hd84C-564 43.2 31.1 50.4 45.2 52.6 45.4 48.3 35.0 31.5 47.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	M484C-1409	47.4	35.0	41.7	59.2	51.7	9.94	35.9	37.0	45.0	0.04	31.0	33.5	31.0
H484L-1399 29.5 21.2 43.0 34.2 22.8 33.3 33.5 37.0 39.0 39.0 26.0 H484L-1399 29.5 21.2 43.0 44.2 45.3 50.4 46.4 48.3 31.2 43.0 45.0 33.0 25.0 H484L-4817 44.2 35.4 42.9 45.3 50.4 46.4 48.3 35.5 34.0 45.0 33.5 47.0 33.0 25.0 H484K-564 45.3 31.1 50.4 52.4 52.4 52.5 34.4 35.5 47.0 33.5 47.0 39.0 30.0 844-1886 43.2 31.1 50.4 52.4 52.5 34.4 38.0 33.5 47.0 39.0 30.0 844-1886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 34.4 38.0 33.0 33.0 844-579 50.0 29.8 45.3 57.5 59.0 55.8 34.4 38.0 39.0 38.0 33.0 844-516 44.5 30.0 45.3 57.5 54.0 55.4 44.0 36.8 34.5 39.0 39.0 38.0 30.0 845-514 47.2 49.5 54.0 52.8 44.0 36.8 34.5 39.5 42.5 39.0 55.8 42.5 39.0 55.4 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.8 42.5 39.0 55.0 48.4 45.0 55.1 45.7 51.2 35.1 38.5 42.5 40.0 52.0 48.2 51.2 35.1 38.5 42.5 40.0 52.0 48.2 51.2 35.1 38.5 42.5 40.0 52.0 48.2 51.2 35.1 36.8 39.0 42.1 36.1 57.9 42.1 57.9 42.1 57.9 42.1 57.0 57.0 57.0 57.0 57.0 57.0 57.0 57.0	Hdd4L-1399 29.5 21.2 41.0 34.2 22.8 33.3 31.3 31.0 39.0 26.0 25.5 Hdd4L-1399 29.5 21.2 42.9 42.9 42.9 46.4 31.2 31.2 43.0 45.0 31.0 25.0 25.0 Hdd4L-1399 20.1 30.1 30.2 31.1 30.2 42.9 40.7 55.4 58.5 52.5 34.0 31.2 41.5 41.5 41.5 41.5 41.5 41.5 31.1 50.1 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.1 50.1 31.2 31.2 31.1 50.1 31.2 31.2 31.2 31.2 31.1 31.2 31.1 50.1 31.2 31.2 31.1 50.1 31.2 31.2 31.2 31.1 50.1 31.2 31.2 31.1 50.1 31.2 31.2 31.1 50.1 31.2 31.2 31.2 31.1 50.1 31.1 51.1 51.1 51.1 51.1 51.1 51.1 51		50.5	35.7	50.6	56.1	0.09	50.1	31.9	33.5	38.0	34.0	25.0	30.5	31.5
1-4817 44.2 35.4 45.3 50.4 46.4 31.2 43.0 45.0 33.0 25.0 1-561 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.5 41.5 40.0 29.0 1-564 45.3 31.1 46.4 48.3 35.6 46.4 48.3 35.5 41.5 40.0 29.0 1-564 45.3 31.1 45.1 46.4 46.7 35.8 47.0 33.0 39.0 <td< td=""><td>-4817 44.2 35.4 45.3 50.4 46.4 33.2 43.0 45.0 33.0 27.0 27.0 -5661 50.1 34.2 35.4 33.5 41.5 40.0 25.0 27.0 -5661 45.1 46.4 46.4 46.3 35.5 34.4 35.5 41.5 40.0 29.0 30.5 -5661 45.3 31.1 46.4 46.4 46.3 35.6 47.0 31.0 30.0 30.0 -542 43.2 31.1 46.0 47.9 46.7 35.8 43.5 47.0 31.0 30.0 30.5 186 43.2 46.9 30.0 46.7 46.7 34.4 38.0 39.0 31.0 30.0 30.0 116 46.9 30.0 46.7 57.8 46.6 34.4 38.0 45.0 31.0 30.0 145 42.7 48.4 45.6 44.0 36.8 38.0 45.0 31.0 30.0 1645 47.3 42.9 50.1 43.7 51.2 33.6 42.5 40.0 27.9 29.8 46.3 47.3 46.8 51.3 50.1 48.</td><td></td><td>29.5</td><td>21.2</td><td>43.0</td><td>34.2</td><td>22.8</td><td>33.3</td><td>32.5</td><td>37.0</td><td>39.0</td><td>39.0</td><td>26.0</td><td>25.5</td><td>31.5</td></td<>	-4817 44.2 35.4 45.3 50.4 46.4 33.2 43.0 45.0 33.0 27.0 27.0 -5661 50.1 34.2 35.4 33.5 41.5 40.0 25.0 27.0 -5661 45.1 46.4 46.4 46.3 35.5 34.4 35.5 41.5 40.0 29.0 30.5 -5661 45.3 31.1 46.4 46.4 46.3 35.6 47.0 31.0 30.0 30.0 -542 43.2 31.1 46.0 47.9 46.7 35.8 43.5 47.0 31.0 30.0 30.5 186 43.2 46.9 30.0 46.7 46.7 34.4 38.0 39.0 31.0 30.0 30.0 116 46.9 30.0 46.7 57.8 46.6 34.4 38.0 45.0 31.0 30.0 145 42.7 48.4 45.6 44.0 36.8 38.0 45.0 31.0 30.0 1645 47.3 42.9 50.1 43.7 51.2 33.6 42.5 40.0 27.9 29.8 46.3 47.3 46.8 51.3 50.1 48.		29.5	21.2	43.0	34.2	22.8	33.3	32.5	37.0	39.0	39.0	26.0	25.5	31.5
(-5661 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.5 41.5 40.0 29.0 (-5642 45.3 31.1 50.4 52.6 46.4 48.3 35.0 33.5 47.0 39.0 39.0 (-5642 45.3 31.1 50.4 52.6 46.4 48.3 35.0 33.5 47.0 39.0 39.0 30.0 1886 44.0 29.8 45.1 46.0 46.7 39.0 39.0 39.0 39.0 39.0 30.0 18.0 45.7 57.5 59.0 55.8 34.4 38.0 39.0 39.0 39.0 30.0 18.0 46.9 30.0 45.3 52.8 56.4 49.3 31.7 36.5 39.0 39.0 39.0 30.0 18.0 46.9 40.2 52.7 46.6 31.7 36.8 38.0 42.5 39.0 39.0 30.0 18.5 18.0 18.5	-5661 50.1 34.2 49.7 55.4 58.5 52.5 34.4 35.5 41.5 40.0 29.0 30.5 (-5642 45.3 31.1 50.4 50.4 58.3 31.5 47.0 31.0 31.0 30.5 (-5642 45.3 31.1 50.4 50.4 52.6 46.4 48.3 31.5 47.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	M484L-4817	44.2	35.4	42.9	45.3	50.4	46.4	33.2	43.0	45.0	33.0	25.0	27.0	26.0
(-5642 45.3 31.1 50.4 52.6 46.4 48.3 35.0 33.5 47.0 39.0 30.0 8886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 43.5 47.0 33.0 30.0 8886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 43.5 47.0 33.0 30.0 8886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 43.5 47.0 33.0 30.0 87.9 50.0 29.8 45.3 57.5 59.0 55.8 34.4 38.0 39.0 32.0 26.0 87.1 46.1 47.2 34.2 49.5 54.0 55.7 46.6 36.8 38.0 42.5 33.0 30.0 87.2 46.3 34.2 48.3 48.4 45.6 44.0 36.8 38.0 42.5 30.0 87.3 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 87.3 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 87.0 12.2 13.9 8.3 14.1 6.1 9.1 9.1 4.5 5.8	(-5642 45.3 31.1 50.4 52.6 46.4 48.3 35.0 33.5 47.0 39.0 30.0 30.5 1886 43.2 31.1 50.4 52.6 46.4 48.3 35.0 33.5 47.0 39.0 30.0 30.5 1886 43.2 31.1 45.1 46.0 47.9 46.7 33.8 43.5 47.0 33.0 33.0 30.0 30.5 17.9 50.0 52.8 56.4 49.3 31.7 36.5 39.0 32.0 53.0 30.0 16.6 46.9 30.0 45.3 52.8 56.4 49.3 31.7 36.5 39.0 32.0 50.0 30.0 16.6 42.7 57.2 59.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 30.0 30.0 16.8 38.0 45.0 38.0 30.0 30.0 16.8 38.0 45.0 30.0 30.0 16.8 38.0 45.0 30.0 30.0 30.0 16.8 38.0 45.0 30.0 30.0 30.0 16.8 31.0 30.0 30.0 30.0 16.8 31.0 30.0 30.0 30.0 16.8 50.2 50.1 43.7 51.2 33.6 42.5 40.0 28.0 33.0 28.0 33.0 10.3 8.9 14.7 6.1 6.1 5.6 40.0 3.1 44.5 5.8 44.5 5.8 44.5 11.9 5.8 5.0 14.1 6.1 6.1 9.1 44.5 5.8 5.8 44.4	M484K-5661	50.1	34.2	49.7	55.4	58.5	52.5	34.4	35.5	41.5	0.04	29.0	30.5	32.5
1886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 43.5 47.0 33.0 30.0 179 50.0 29.8 45.7 57.5 59.0 55.8 34.4 38.0 39.0 33.0 31.0 116 46.9 30.0 45.3 52.8 56.4 49.3 31.7 36.5 39.0 32.0 26.0 1461 47.2 29.8 49.5 54.0 52.7 46.6 34.5 39.5 42.5 33.0 35.5 159 47.2 29.8 48.4 45.6 44.0 36.8 38.0 42.5 40.0 28.0 15045 47.3 42.9 50.1 43.7 51.2 35.1 35.1 36.1 27.9 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 46.3 5.3 10.3 8.9 14.7 6.1 6.1 6.1 4.5 5.8 12.2 13.9 8.3 14.1 6.	1886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 43.5 47.0 31.0 30.0 30.5 1886 43.2 31.1 45.1 46.0 47.9 46.7 35.8 34.4 38.0 39.0 31.0 31.0 31.0 186 46.9 29.8 45.7 57.5 56.4 49.3 31.7 36.5 39.0 31.0 31.0 186 47.2 34.2 49.5 54.0 52.7 46.6 34.4 38.0 42.5 31.0 30.0 186 47.2 47.2 48.3 48.4 45.6 44.0 36.8 38.0 45.5 31.0 186 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 186 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 186 47.3 42.5 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 186 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 187 12.2 13.9 8.9 14.7 6.1 6.1 9.1 4.5 5.8 4.4 188 4.4 4.5 4.5 4.5 4.5 4.5 4.5 188 4.4 6.1 6.1 6.1 9.1 4.5 5.8 4.4 189 4.4 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 4.5 189 4.5 4.5 4.5 189 4.5 4.5 4.5 189 4.5 4.5 4.5 189 4.5 189	M484K-5642	45.3	31.1	50.4	52.6	46.4	48.3	35.0	33.5	47.0	39.0	30.0	30.5	32.0
579 50.0 29.8 45.7 57.5 59.0 55.8 34.4 38.0 39.0 31.0 516 46.9 30.0 45.3 52.8 56.4 49.3 31.7 36.5 39.0 32.0 26.0 1461 47.2 34.2 49.5 52.8 56.4 49.3 31.7 36.5 39.0 32.0 26.0 1461 47.2 34.2 49.5 52.7 46.6 34.5 39.5 42.5 33.0 30.0 159 42.7 42.8 48.4 45.6 44.0 36.8 38.0 45.5 40.0 28.0 15045 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 46.3 35.4 46.8 51.3 50.0 48.2 5.6 3.9 3.4 5.3 10.3 8.9 14.7 6.1 6.1 9.1 4.5 5.8 5.3 12.2 13.9 8.3 14.1 6.1<	59.0 29.8 45.7 57.5 59.0 55.8 34.4 38.0 39.0 38.0 31.7 36.5 39.0 38.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 36.5 39.0 32.0 26.0 30.0 40.0 30.0 40.0 30.0 40.0 30.0 40.0 30.0 40.0 <th< td=""><td>V84-1886</td><td>43.2</td><td>31,1</td><td>45.1</td><td>46.0</td><td>47.9</td><td>46.7</td><td>35.8</td><td>43.5</td><td>47.0</td><td>33.0</td><td>30 °0</td><td>30.5</td><td>29.5</td></th<>	V84-1886	43.2	31,1	45.1	46.0	47.9	46.7	35.8	43.5	47.0	33.0	30 °0	30.5	29.5
116 46.9 30.0 45.3 52.8 · 56.4 49.3 31.7 36.5 39.0 32.0 26.0 1461 47.2 34.2 49.5 54.0 52.7 46.6 34.5 39.5 42.5 33.0 30.0 1461 47.2 29.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 35.5 15.9 10.3 47.3 · 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 48.2 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 13.4 14.7 6.1 6.1 9.1 4.5 - 5.8 5.8 11.9 8.3 14.1 6.1 6.1 9.1 4.5 5.8	46.9 30.0 45.3 52.8 56.4 49.3 31.7 36.5 39.0 32.0 26.0 30.0 46.1 47.2 34.2 54.0 52.7 46.6 34.5 39.5 42.5 33.0 30.0 30.0 35.9 42.7 29.8 48.4 45.6 44.0 36.8 38.0 45.5 30.0 30.0 35.9 42.7 42.5 38.0 42.5 40.0 35.5 32.0 30.4 47.3 42.9 50.2 50.1 43.7 51.2 33.6 42.5 40.0 28.0 33.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 65 5.3 10.3 8.9 14.7 6.1 6.1 9.1 4.5 5.8 4.4 7 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	V84-579	50.0	29.8	45.7	57.5	59.0	55.8	34.4	38.0	39.0	38.0	31.0	32.0	30 .0
1461 47.2 34.2 49.5 54.0 52.7 46.6 34.5 39.5 42.5 33.0 30.0 559 42.7 29.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 35.5 5045 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 .05 5.3 10.3 8.9 14.7 6.1 6.1 9.1 4.5 5.8 () 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8	1461 47.2 34.2 49.5 54.0 52.7 46.6 34.5 39.5 42.5 33.0 30.0 30.0 559 42.7 29.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 38.0 45.5 38.0 38.0 38.0 45.5 38.0 38.0 45.5 38.0 38.0 45.5 38.0 42.5 40.0 28.0 33.0 5045 47.3 42.9 50.2 51.2 51.2 33.6 42.5 40.0 28.0 33.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 6.0 12.2 13.9 8.9 14.7 6.1 6.1 9.1 4.5 5.8 4.4 7 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	V84-616	46.9	30.0	45.3	52.8	4.95	49.3	31.7	36.5	39.0	32.0	26.0	30.0	27.0
559 42.7 29.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 35.5 5045 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 .05 5.3 10.3 8.9 14.7 6.1 6.1 9.1 4.5 5.8 () 12.2 13.9 8.3 14.1 6.1 6.1 9.1 4.5 5.8	559 42.7 29.8 48.3 48.4 45.6 44.0 36.8 38.0 45.0 38.0 35.1 38.5 42.5 40.0 28.0 32.0 50.45 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 33.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 .05 5.3 10.3 8.9 14.7 6.1 9.1 4.5 5.8 4.4 () 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	V83-1461	47.2	34.2	49.5	54.0	52.7	46.6	34.5	39.5	42.5	33.0	30.0	30.0	31.0
5045 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 .05 5.3 10.3 8.9 14.7 6.1 6.1 9.1 4.5 5.8	5045 47.3 42.9 50.2 50.1 43.7 51.2 35.1 38.5 42.5 40.0 28.0 33.0 46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 .05 5.3 10.3 8.9 14.7 6.1 2.6 3.9 3.4 2.8 () 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	V83-359	42.7	29.8	48.3	48.4	45.6	0.44	36.8	38.0	45.0	38.0	35.5	32.0	33.0
46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 .05 5.3 10.3 8.9 14.7 6.1 2.6 3.9 3.4 () 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8	46.3 35.4 46.8 51.3 50.0 48.2 33.6 42.1 36.1 27.9 29.8 5.3 10.3 8.9 14.7 6.1 2.6 3.9 3.4 2.8 () 12.2 13.9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	V83-5045			50.2	50.1	43.7	51.2	35.1	38.5	42.5		28.0	33.0	31.0
5.3 10.3 8.9 14.7 6.1 2.6 3.9 12.2 13.9 8.3 14.1 6.1 9.1 4.5	3 8.9 14.7 6.1 2.6 3.9 3.4 2.8 9 8.3 14.1 6.1 9.1 4.5 5.8 4.4 1	Mean	46.3	35.4	46.8	51.3	50.0	48.2	33.6		42.1	36.1	27.9	29.8	29.7
12.2 13.9 8.3 14.1 6.1 9.1 4.5	9 8.3 14.1 6.1 9.1 4.5 5.8 4.4	rsp .05	5.3	10.3	1	8.9	14.7	6.1	2.6		3.9	•	3.4	2.8	80
		CV (X)	12.2	13.9	1	8.3	14.1	6.1	9.1		4.5	1	5.8	4.4	1.4

Table 4. Plant lodging (score) and plant Meight (inches) of strains in Middle Atlantic Group III-IV tests evaluated at six locations in 1986.

			Plant Lodging	odging						Plant Height	leight			
Strain	Strain	Adelphia	Landisville PA	Georgetown DE	Queenstown MD	Orange	Warsaw VA	Strain	Adelphia	Landisville PA	Georgetown DE	Queenstown MD	Orange VA	Warsaw VA
Pella	1.8	2.0	2.3	1.0	2.3	1.5	1.5	35.5	39.0	34.0	23.0	36.5	36.0	38.0
Sparks	2.4	3.0	3.0	1.0	2.8	2.0	1.8	43.3	50.5	43.5	26.0	40.5	46.0	44.5
Fayette	2.5	3.0	3.3	1.0	2.5	2.5	2.0	38.7	41.5	37.0	24.0	38.0	41.0	43.5
CX797-21	2.6	3.0	3.0	2.0	3.3	2.5	1.8	38.9	44 .0	32.0	26.0	44.5	39.5	41.0
V82-885		1.5	2.5	1.0	2.5	1.0	1.3	35.6	39.0	33.0	24.0	38.0	38.0	36.0
M484C-0502	12 2.2	2.5	2.5	1.0	2.3	2.5	1.8	38.4	38.5	37.0	25.0	39.5	0.04	43.5
M484C-0897	17 2.8	3.0	3.5	1.0	3.5	2.5	2.3	44.2	46.5	44.5	26.0	48.5	46.0	44.5
M484C-0900		2.5	3.0	2.0	2.8	2 °0	2.0	41.5	44.5	39.0	28.0	41.5	45.5	43.5
Md84C-1409		0.4	3.8	1.0	3.3	1.0	1.8	39.7	39.5	36.5	27.0	43.0	43.0	43.0
M484C-1749	19 2.7	3.0	3.0	1.5	3.0	3.0	2.0	39.1	37.5	35.5	24.0	42.0	46.0	42.0
M484L-1399		1.5	2.5	1.0	2.0	1.0	1.0	21.9	26.5	2.6 .0	19.0	21.0	18.0	19.5
M484L-4817	17 2.8	0° 7	3.8	1.5	2.5	2.5	1.8	30.7	29.5	30.0	24.0	31.5	29.0	37.0
M484K-5661	51 2.6	0.4	3.3	1.0	2.8	2.0	2.0	35.0	37.0	29.5	23.0	36.5	36.5	41.5
M484K-5642	12 3.0	0.4	3.8	2 .0	3.3	2.5	1.8	38.5	39.0	33.0	27.0	0.44	39.0	43.5
V84-1886	2.7	3.5	3.3	1.0	3.0	2.5	2.3	36.4	31.0	34.0	28.0	39.5	41.5	40.0
V84-579	2.3	3.0	3.5	1.5	2.0	2.0	1.5	30.5	35.0	33.5	21.0	30.0	29.5	29.5
V84-616	2.1	3.0	3.0	1.0	2:0	1.5	1.8	33.1	37.5	35.0	22.0	33.5	32.0	33.0
V83-1461	2.9	0. 4	3.0	1.0	3.5	3.0	2.0	36.7	38.5	32.5	25.0	37.5	39.0	42.0
V83-359	2.4	3.0	2.5	2 ° 0	3.3	2.0	1.5	40.2	40.5	33.5	27.0	45.0	45.5	43.0
V83-5045	1.5	2.0	2.0	1.0	2 ° 0	1.0	1.0	27.4	33.5	32.0	22.0	28.5	23.5	22.0
,			c	-	r			. ,,	9.	ě	è	,		
Mean	7.04	0.5	3.0	1.3	7.7	7.0	1.1	36.3	38.4	34.5	24.5	37.9	37.7	38.5
rsp .05	• 5	.,	e0 *	1	6.	1.3	\$	3.8	4.5	5.5	1	5.1	5.7	4.3
CA (%)	23.3	11.6	12.9	;	16.0	31.0	14.7	12.3	9.6	7.6	ł	4.9	7.2	5.4

1/ Data from one replication

Table 5. Seed quality (score) and seed size (g/100) of strains in Middle Atlantic Group III-IV tests evaluated at five and four locations, respectively, in 1986.

			Seed Quality	יל					Seed Size	ize		
Strain	Strain	Landisville PA	Georgetown DE	Queenstown	Orange	Warsaw VA	Strain	Landisville PA	Queenstown	Orange VA	Warsaw VA	1
Pella	2.6	3.5	2.5	. 2.3	2.5	2.8	22.0	18.7	18.9	23.8	25.0	1
Sparks	2.1	2.0	0.6	1.9	2.0	eo •	19.9	17.7	17.0	20.9	22.9	
rayerre CX797-21	1.9	2.0	2.5	2.0	2.0	1.0	19.4	18.4	17.4	18.4	21.1	
V82-885	1.7	2.0	2.0	1.5	2.0	1.2	14.2	. 13.1	12.8	15.6	14.5	
M484C-0502	1.8	2.0	2.5	1.5	1.5	2.0	17.0	16.2	14.4	17.6	19.3	
Md84C-0897	1.7	1.5	2.5	1.4	8.6	1.8	17.6	17.2	15.9	18.3	18.8	
M484C-0900	1.9	2.0	2.5	1.4	2.0	2.0	18.4	19.1	16.3	18.6	19.8	
Md84C-1409	2.4	2.0	U & E	2.0	2.3	2 000	22.2	17.8	0.61	23.6	24.3	
M484L-1399	2.0	2.0	2.0	1.7	2.5	1,3	17.5	15.0	16.5	18.5	18.7	
M484L-4817	1.7	2.0	2.5	1.5	1.8	1.0	16.7	15.2	14.2	18.7	18.0	
M484K-5661	2.4	2.5	2.5	2.5	.2.5	2.0	17.3	16.6	15.7	17.8	18.5	
M484K-5642	2.4	2.5	3.5	1.8	2.5	2.2	18.2	15.8	16.0	18.3	21.3	
V84-1886	1.8	2.0	2.0	1.5	2.0	1.2	15.7	17.3	13.6	15.6	, 17.1	
V84-579	1.9	2.0	2.0	1.7	2.5	1.2	17.3	14.6	15.3	18.6	19.2	
V84-616	2.0	3.0	2.5	1.4	2.0	1.5	17.8	14.5	15.6	19.0	20.4	
V83-1461	2.0	2.5	2.5	1.8	2.3	1.2	16.0	14.3	14.5	16.3	17.9	
V83-359	1.6	2.0	2.0	1.5	1.5	1.0	15.0	13.9	14.4	15.5	15.6	
V83-5045	1.7	2.0	2.0	1.5	1.8	1.2	17.5	15.4	15.4	19.0	19.0	
Mean	2.0	2.2	2.5	1.1	2.1	1.7	17.9	16.3	15.9	18.9	19.8	ı
LSD .05	4.	1	1	4, .	**	;	1.4	1	1.2	1.5	1.4	
cv (%)	18.6	1	1	10.4	9.8	8	7.3	1	3.6	3.8	3.3	
												1

-8-

1/ Data from one replication

Table 6. 1986 Mid-Atlantic Maturity Group IVS Test

Entry No.	Strain	Pedigree
1	Stafford	
2	Douglas	
3	S79-4259	Bedford x Crawford (SCN res.)
4	Md84C-0641	Essex x A75-302005
5	Md84C-0499	Essex x A75-302005
6	Md84C-0591	Essex x A75-302005
7	Md84C-1289	Union x Md71-1643-82
8	Md84K-5476	Douglas x MBB80-115
9	Md84K-5451	Douglas x MBB80-115
10	Md84K-6025	Nathan x Franklin (SCN res.)
11	Md84K-5666	Douglas x Franklin (SCN res.)
12	Md84K-5681	Douglas x Franklin (SCN res.)
13	Md84K-5721	Douglas x Franklin (SCN res.)
14	V83-1466	Bedford x L77-994 (SCN res.)
15	V83-1422	Essex ⁴ x L73-811
16	V83-1454	Essex 4 x L73-811
17	V83-1357	Essex ³ x L73-811
18	· V83-702	PI 96194-3 x Essex
19	V83-720	PI 96194-3 x Essex
20	V83-767	PI 96194-3 x Essex

⁴ locations: Georgetown, DE; Queenstown, MD; Orange, VA; Warsaw, VA

² replications x 4-row plots, 20' row length and 30" row spacing at Georgetown and Queenstown; 3-row plots with 20' row length and 36" row spacing at Warsaw and Orange; 160 seeds/row.

Table 7. Mean performance of strains in Middle Atlantic Group IVS tests evaluated at four locations in 1986. 1/

	$\frac{2}{le}$ Mottled seed (%)	0	3	5	0	0	0	0	5	3	0	2	9	0	0	0	0	0	0	0	0
its	3/ 2/ Purple stain (%)	0 8	4 0.8	5 0	0			0	0	0		0	7	4	0	0	0	0	0		0
Seed Traits	ein 0i1) (%)	.2	.0 19	.0 19	.8 18	.1 19	.4 19	.0 19	.0 19	.8	.7 18	.5 18	.9	.9 18	.8 17	.8 18	.6 19	.4 17	.3 18	.6 18	.2 18
	2/ e Protein 100) (%)		.4 41	.5 40			.6 43								.1 42			.5 43		.4 42	
	Quality Size (score) (g/100)	.5 14	.8 20	.7 17	.5 15	.0 17	.9 18	.7 21	•6 18	.0 17	1 16	.2 19	.7 19	.4 17	.5 13	.6 15	.8 18	.4 15	.5 16	.4 17	.6 17
	Height Qu	6.1		0.	6.	*4	.1	.1	.7	.1	9.	.3	6.	• 4	39.7 1	9.	.7	9.1	7	6.0	1.1
nt Traits	Lodging H (score) (i	1.9	2.1	2.4		1.8		2 .0	1.7	2.4	2.1	2.4	1.6	2.4	2.9	3 °0		1.9		2.4	2.0
Plant	Maturity (Days after Aug. 31)	6.44	34.9	38.7	38.4	34.4	36.6	37.3	36.0	37.9	35.7	34.7	36.6	38.1	43.1	45.9	9.44	7.47	39.9	43.9	40.7
	Yield a) Rank	6	5	17	က	1	15	2	13	80	20	16	18	12	19	10	7	4	9	11	14
	Yi. (bu/a)	51.0	53.5	6.44	53.8	54.6	47.9	53.9	49.2	51.2	44.1	45.6	6.44	9.67	9.44	50.1	51.4	53.7	52.5	50.0	48.8
	Strain	Stafford	Douglas	879-4259	Md84C-0641	M484C-0499	Md84C-0591	Md84C-1289	Md84K-5476	Md84K-5451	5 Md84K-6025	Md84K-5666	Md84K-5681	Md84K-5721	V83-1466	V83-1422	V83-1454	V83-1357	V83-702	V83-720	V83-767

Data from Georgetown, Queenstown, Orange, and Warsaw.

^{2/} Data from Queenstown, Orange, Warsaw.

 $[\]frac{3}{}$ Data from Queenstown.

Seed yields (bu/a) and maturity (days after August 31) of strains in Middle Atlantic IVS tests evaluated at four locations in 1986. Table 8.

	Warsaw VA	40.5	36 6 36 6 36 6 37 6	38.5	35.0	36.0	36.0	37.5	40.5	41.5	41.5	37.0	39.5	7	37.5	3.4	4.3
	Orange VA	47.0	38 °C 33 °C 33 °C	33.5	33.5	32.5	34.5	34.5	42.5	0.64	46.0	41.5	7		39.0	3.2	4.0
Maturity	Queenstown MD	46.0	39.0 32.0	35.5	37.0 37.0	36.5	37.0	38.0	0.44	0.94	45.0	39.0	0.44	41.5	39.3	4 • 3	5.3
	Georgetown DE	47.0	45.0 40.0 40.0	41.0	41.0 42.0	40.0	41.0	47.0	48.0	48.0	47.0	0.44	76.0	45.0	43.7	!	1
	Strain	44.9	38.7 38.4 34.4	36.6	36.0	35.7	36.6	38.1	43.1	45.9	9* 77	39.9	43.9	40.7	39.3	3 *0	7.0
	Warsaw VA	50.9	41.0 53.0 52.0	48.5	44.2	40.7	45.1	43.0	40.5	50.8	47.1	47.8	8.44	46.7	47.0	6.9	7.0
	Orange VA	53.4	58.7 58.3	40.8	50 °3 58 °2	44.0	40.0	56.3	47.9	53.1	51.8	51.5	56.1	47.2	51.7	11.5	10.6
Yield	Queenstown	49.1 53.5		55.1 54.1	52.4	47.5	50.3	50.4	45.8	46.8	58.0	00		54.2	52.2	NS	10.6
	Georgetown DE	50.1 44.5	43.1	46.4 50.4	50.3	44.1	43.4	48.0	43.7	49.3	45.7	51.3	43.4	45.4	46.5	;	1
	Strain mean	51.0	53.8 54.6	47.9 53.9	49.2 51.2	44.1	6. 44	9.64	9.44	50.1	51.4	52.5	50.0	48.8	7.64	5.7	10.7
	Strain	Stafford Douglas	M484C-0641 M484C-0499	Md84C-0591 Md84C-1289	Md84K-5476 Md84K-5451	M484K-6025	Md84K-5681	Md84K-5721	V83-1466	V83-1422	V83-1454 V83-1357	V83-702	V83-720	V83-767	Mean	LSD .05	CV (%)

 $\frac{1}{2}$ Data from one replication.



Table 9. Plant lodging (score) and plant height (inches) of strains in Middle Atlantic Group IVS tests evaluated at four locations in 1986.

	Warsaw VA	1 ∞	42.0	96.0	28.5	41.5	43.5	44.5	42.5	48.5	53.5	43.5	41.0	44.0	42.5	33.0	43.5	34.0	33.0	33.5	32.5		41.0	9.6	6.5
	Orange VA	36.0	37.0	52.0	31.0	41.0	40.0	44.5	37.5	45.5	0.64	47.5	37.5	45.5	39.0	37.5	45.0	29.0	31.5	3	30.0		39.4	6.9	8
Plant Height	Queenstown MD	36.5	0	50.5	28.5	37.5	40.5	0.44	41.0	43.0	49.5		43.0	45.5	42.0	30.5	0.94	29.0	29.0	31.5	35.5	1	39.5	4.7	5.7
Pla	Georgetown DE 1/	31.0	22.0	33.0	19.0	22.0	26.0	22.0	29.0	28.0	29.0	26.0	22.0	27.0	31.0	26.0	30.0	20.0	21.0	20.0	22.0	1	25.3	ļ	1
	Strain mean	36.1	37,3	50.0	27.9	37.4	39.1	41.1	38.7	43.1	47.6	43.3	37.9	42.4	39.7	32.6	42 .7	29.1	29.7	30.9	31.1		37.9	3.8	7.6
	Warsaw VA	1.5	1.8	2 00	1.0	1.5	2.3	1.8	1.3	2.3	1.8	1.5	1.3	1.8	2.5	2.5	2.5	1.5	1.8	2.0	1.5		1.8	9.	16.1
80	Orange VA	2.0	2.0	3.0	1.0	1.5		2 .0		2.5		3.0		2.5			3.5	2.5	1.5	3.0	2.0		2.3	တ္	17.6
Plant Lodgin	Queenstown MD	2.5	3.3	2.5	2.0	2.8	3.3	2.5	2.8	3.1	3.0	3.3	3.0	3 .0	3.5	3.1	3.0	2.0	2.0	2.5	2.6		2.8	NS	18.2
	Georgetown DE $1/$	1.5	1.0	1.5	2.0	1.0	1.5	1.5	1.0	1.0	1.5	1.0	1.0	2.0	2.5	2.0	1.5	1.0	2.0	2.0	1.5		1.5	;	1
	Strain mean	1.9	2.1	2.4	1.4	1.8	2.5	2.0	1.7	2.4	2.1	2.4	1.6	2.4	2.9	3.0	2.8	1.9	1.8	2.4	2.0		2.2	9.	25.9
	Strain n	Stafford	Douglas	879-4259	Md84C-0641	M484C-0499	Md84C-0591	Md84C-1289	Md84K-5476	Md84K-5451	M484K-6025	M484K-5666	Md84K-5681	Md84K-5721	V83-1466	V83-1422	V83-1454	V83-1357	V83-702	V83-720	V83-767		Mean	LSD .05	CA (%)

1/ Data from one replication.

Seed quality (score) and seed size (g/100) of strains in Middle Atlantic IVS tests evaluated at four and three locations, respectively, in 1986. Table 10.

	Warsaw VA	14.7 22.0 18.9 17.0 20.3 20.7 24.3 20.7 24.3 20.5 19.4 17.9 22.0 18.6 16.0 17.4 18.5	18.8	1.5	3.8	
Size	Orange VA	15.6 20.1 16.8 16.8 16.8 18.4 21.5 19.2 19.0 19.0 19.8 17.6 17.6 17.6 13.4 17.7 18.5 16.4 18.7	17.7	1.4	3.7	
Seed	Queenstown MD	12.9 18.9 16.6 13.9 15.9 16.6 19.8 16.7 16.7 17.4 11.7 17.5 14.8 14.8 16.4	16.0	1.3	4.0	
	Strain mean	14.4 20.4 17.5 15.7 17.7 18.6 21.9 18.8 17.9 16.5 19.6 19.6 19.6 19.6 19.6 19.7 17.7	17.5	1.4	6.7	
	Warsaw $VA \frac{1}{L}$	12.2 1.2 1.2 1.2 1.2 1.2 1.2 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	1.3	1	!	
	Orange VA	1	1.9	9.	16.2	
Seed Quality	Queenstown MD	1.6 1.6 1.7 1.7 1.7 2.9 2.9 2.9 1.9 1.9	2.1	೮	6.3	
S	Georgetown DE $1/$	11.0 2.5 3.0 3.0 3.0 3.0 1.5 1.5 1.5 1.5	2.1	ł	1	
	Strain mean	1	1.9	5.	23.2	
	Strain	Stafford Douglas S79-4259 Md84C-0641 Md84C-07591 Md84K-0551 Md84K-5451 Md84K-5451 Md84K-5666 Md84K-5625 V83-1466 V83-1466 V83-1454 V83-1454 V83-1454 V83-1454 V83-1454 V83-1454	Mean	TSD .05	(%) AO	

1/ Data from one replication.

Table 11. 1986 Mid-Atlantic Maturity Group V Test

Entry No.	Strain	Pedigree
1	Essex	
2	Forrest	
3	V78-184	V68-1034 x Essex
4	D76-8070	High protein check
5	Md84L-5003	Hobbit x L78-2206 (fasciated)
6	Md84K-5469	Douglas x MBB80-115
7	Md84K-5511	Douglas x MBB80-138
8	Md84K-6061	Nathan x Pixie (SCN res.)
9	Md84K-5817	D77-18 x Essex (SCN res.)
10	Md84K-5246	Ware x Pixie
11	V83-5064	Ms2 population
12	V83-73	Bay x York
13	V84-1751	Essex x R75-579 (SCN res.)
14	V84-1726	Essex x R75-579 (SCN res.)
15	V84-1681	Essex x R75-579 (SCN res.)
16	V84-1808	Epps x L77-994 (SCN res.)
17	V84-1805	Epps x L77-994 (SCN res.)
18	·V84-1049	Stafford x Epps (SCN res.)
19	V84-1801	Epps x L77-994 (SCN res.)
20	V84-1790	Epps x L77-994 (SCN res.)

⁴ locations: Georgetown, DE; Queenstown, MD; Orange, VA; Warsaw, VA

² replications x 4-row plots, 20' row length and 30" row spacing at Georgetown and Queenstown; 3-row plots with 20' row length and 36" row spacing at Warsaw and Orange; 160 seeds/row.

Mean performance of strains in Middle Atlantic Group V tests evaluated at four locations in 1986. 1/Table 12.

Strain Wield (Days after (score) (inc.) Strain (bu/a) Rank Aug. 31) Essex 54.6 1 46.8 2.3 30 Forrest 45.7 16 50.7 2.8 39 V78-184 47.0 12 50.7 2.8 39 V78-184 47.0 12 51.7 2.2 36 V78-184 47.0 12 51.7 2.2 36 V78-184 47.0 12 51.7 2.2 36 Md84K-5469 49.0 9 36.3 2.3 41 Md84K-5511 51.4 5 36.5 2.2 44 Md84K-5511 51.4 5 36.5 2.2 44 Md84K-511 51.4 5 36.5 2.1 36 Md84K-5246 53.8 3 39.8 2.6 4 V83-73 46.2 14 50.7 2.4 40 V84-1751 46.2 14 46.8 2.8 36 V84-1802 47.1 11 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
(bu/a) Rank Aug. 31) 54.6 1 46.8 2.3 45.7 16 50.7 2.8 47.0 12 51.7 2.2 003 36.4 20 42.3 2.9 469 49.0 9 36.3 2.3 511 51.4 5 36.5 2.1 817 49.6 7 49.0 2.1 49.2 2.1 40.2 14 50.7 2.4 46.2 14 50.7 2.4 46.2 14 50.7 2.4 46.2 14 50.7 2.4 48.5 10 51.5 2.4 48.5 10 51.5 2.3	er	t Quality (score)	2/ Size (g/100)	Protein (%)	0i1 (%)	$\frac{2}{\text{Purple}}$	Mottled seed
54.6 1 46.8 2.3 45.7 16 50.7 2.8 47.0 12 51.7 2.8 47.0 12 51.7 2.2 00 41.4 18 43.5 2.5 469 49.0 9 36.3 2.9 511 51.4 5 36.3 2.3 6061 54.0 2 43.0 2.1 817 49.6 7 49.2 2.1 44 51.8 4 40.2 1.4 45.1.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 47.1 11 48.2 2.3 47.1 11 48.2 2.3 46.2 17 46.2 2.4 47.1 11 48.2 2.3 47.1 11 46.2 2.3 47.1 11 46.2 2.3 47.2 17 46.2 2.3 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>(%)</th><th>(%)</th></t<>						(%)	(%)
45.7 16 50.7 2.8 47.0 12 51.7 2.2 0 41.4 18 43.5 2.5 003 36.4 20 42.3 2.9 469 49.0 9 36.3 2.3 511 51.4 5 36.5 2.2 061 54.0 2 43.0 2.1 817 49.6 7 49.2 2.1 4 51.8 4 40.2 1.4 4 51.8 4 40.2 1.4 4 50.7 6 52.2 1.9 6 50.7 6 52.2 1.9 6 50.7 6 52.2 1.9 7 48.5 10 51.5 2.4 1 48.5 10 51.5 2.3 4 47.1 11 46.2 2.3 4 47.1 11 46.2 2.3 4 47.1 11 46.2 2.3 4 <	2.3 30	1.6	15.9	43.5	18.5		
47.0 12 51.7 2.2 0 41.4 18 43.5 2.5 003 36.4 20 42.3 2.9 469 49.0 9 36.3 2.9 511 51.4 5 36.5 2.3 661 54.0 2 43.0 2.1 246 53.8 3 39.8 2.6 4 51.8 4 40.2 1.4 4 51.8 4 40.2 1.4 4 51.8 4 46.2 1.4 4 50.7 6 52.2 1.9 6 50.7 6 52.2 1.9 6 50.7 6 52.2 1.9 7 48.5 10 51.5 2.4 81 48.5 10 51.5 2.3 81 48.2 2.3 2.3 82 47.1 11 48.2 2.3 83 46.2 2 2 2 84 5 6 52.2 1.9 84 7 46.2 2 2 84 7 11 48.2 2	2.8 39.	1.6	14.1	41.6	18.6	0.0	0.2
0 41.4 18 43.5 2.5 003 36.4 20 42.3 2.9 469 49.0 9 36.3 2.9 511 51.4 5 36.5 2.2 061 54.0 2 43.0 2.1 246 53.8 3 39.8 2.6 4 6.2 14 50.7 2.4 4 6.2 14 50.7 2.4 4 6.2 14 50.7 2.4 1 45.7 15 46.8 2.8 1 48.5 10 51.5 2.4 1 48.5 10 51.5	2.2 36	1.5	16.9	41.9	19.0		
36.4 20 42.3 2.9 49.0 9 36.3 2.3 51.4 5 36.5 2.2 54.0 2 43.0 2.1 49.6 7 49.2 2.1 53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 47.1 11 48.2 2.3 47.1 11 48.2 2.3 47.1 11 48.2 2.3 47.1 11 48.2 2.3	2.5 32	1.5	18.4	47.9	14.1		
49.0 9 36.3 2.3 51.4 5 36.5 2.2 54.0 2 43.0 2.1 49.6 7 49.2 2.1 53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 47.1 11 48.2 2.3 47.1 11 48.2 2.3 47.1 11 46.2 2.3 47.1 11 48.2 2.3		2.1	15.3	39.8	20.4		
51.4 5 36.5 2.2 54.0 2 43.0 2.1 49.6 7 49.2 2.1 53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 47.1 11 48.2 2.3 46.2 2 2 2	2.3 41	2.7	17.9	42.1	19.2		
54.0 2 43.0 2.1 49.6 7 49.2 2.1 53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 47.1 11 48.2 2.3 48.2 2.3 2.3 48.3 2.3 2.2	2.2 44	2.7	20.4	9°04	19.0		
49.6 7 49.2 2.1 53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 47.1 11 46.2 2.3 47.2 17 46.2 2.3	2.1 32	1.4	15.5	41.1	.19.2		
53.8 3 39.8 2.6 51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 47.3 17 46.2 2.3	2.1 36	1.5	15.8	43.0	17.5		
51.8 4 40.2 1.4 46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 43.8 17 46.2 2.3	2.6 42	2.1	20.3	41.1	19.4		
46.2 14 50.7 2.4 45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 47.2 17 46.7 2.3	1.4	1.5	21.8	43.0	18.7		
45.7 15 46.8 2.8 50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 43.8 17 46.7 2.3	2.4 40	1.4	19.0	41.3	20.1		
50.7 6 52.2 1.9 48.5 10 51.5 2.4 47.1 11 48.2 2.3 43.8 17 46.2 2.3	2.8 36	1.5	16.1	41.8	18.8		
48.5 10 51.5 2.4 47.1 11 48.2 2.3 43.8 17 46.2 2.3	1.9	1.4	15.4	41.6	19.4		
47.1 11 48.2 2.3	2.4 34	1.7	16.1	43.2	18.4		
1,3 8 17 46.7 2.2	2.3 36	1.6	17.0	45.0	18.3		
7.7 7.0t /T 0.0t	2.2	1.7	13.2	42.2	18.2		
46.2 13 51.2 2.3	2.3 38	1.5	14.2	42.1	19.2		
39,1 19 48.8 2.7	2.7	1.6	18.6	45.9	18.0		
49.2 8 44.3 2.6	3 2.6 35	1.5	16.9	45.9	18.5		

1/ Data from Georgetown, Queenstown, Orange, and Warsaw

^{2/} Data from Queenstown, Orange, and Warsaw.

^{3/} Data from Queenstown.



Table 13. Seed yields (bu/a) and maturity (days after August 31) of strains in Middle Atlantic Group V tests

evaluated at four and three locations, respectively, in 1986.

			Yield				Maturity	λ.	
Strain	Strain	Georgetown DE	Queenstown MD	Orange VA	Warsaw VA	Strain mean	Queenstown MD	Orange VA	Warsaw VA
Essex	54.6	9.84		61.5	52.8	46.8	0.64	50.0	41.5
Forrest	45.7	3	43.5	51.2	44.2	50.7	54.5	56.0	41.5
V78-184	47.0	9.		56.1	42.0	51.7	55.0	57.0	43.0
D76-8070	41.4			43.4	0.44	43.5	50.0	41.5	39.0
Md84L-5003	36.4	31.1		38.4	41.0	42.3	48.0	40.0	39.0
Md84K-5469	0.64	7		45.2	53.8	36.3	39.0	33.0	37.0
Md84K-5511	51.4	0		55.1	52.8	36.5	37.0	36.5	36.0
Md84K-6061	4	0		58.6	49.7	43.0	48.0	, 42.5	38.5
Md84K-5817	9.67	6		43.8	53.1	49.2	0°67	55	43.5
Md84K-5246	3	_		63 ° 4	49.8	39.8	42.5	38.0	39.0
V83-5064	51.8	51.6		51.1	54.5	40.2	0.44	38.0	38.5
V83-73	9	6		58.1	39.9	50.7	53.0	55.0	0.44
V84-1751	5	6		43.3	46.2	46.8	50.0	51.0	39.5
V84-1726	50.7	9		50.8	51.2	52.2	55.0	58.0	43.5
V84-1681	48.5	43.1		55.8	40.3	51.5	53.0	57.5	44.0
V84-1802	47.1	41.7		43.2	41.7	48.2	50.0	51.5	43.0
V84-1805	43.8	39.5		9.69	41.2	46.2	47.0	50.5	41.0
V84-1049	46.2	40.8		52.2	42.4	51.2	54.0	55.5	0.44
V84-1801	39.1	39.4	6	48.5	39.5	48.8	50.0	52.5	44.0
V84-1790	49.2	43.3		61.4	43.8	44.3	47.0	746.0	0.04
Mean	9° 44	43.6	7°87	52.0	46.2	0.94	48.7	48.2	41.0
rsp .05	7.7	8.5	8.0	11.6	NS	5.4	2.2	3.8	2.0
(%) (%)	16.1	0 3	7.9	10.7	19.9	10.0	2 2	ď	6

Table 14. Plant lodging (score) and plant height (inches) of strains in Middle Atlantic Group V tests evaluated at four locations in 1986.

								•		
Strain	Strain mean	George town DE	Queenstown . MD	Orange VA	Warsaw VA	Strain mean	Georgetown DE	Queenstown MD	Orange VA	Warsaw VA
Essex	2.3	1.5	3.0	3.0		1 0	26.0	31.0	31.0	35.0
Forrest			3.5	3.5	2.0	39.8	36.5	∞	39.5	44.5
V78-184	2.2	2.0	3.3	2.0	1.5	9	29.5	35.5	40.0	42.5
D76-8070		2.3	3.8	2.0	2.0	2	9	2	33.0	S
Md84L-5003		3.3	3.3	3.0		3	7	2	33.5	38.0
Md84K-5469	2.3	1.5	3.5	2.5	1.8	-	7	7	45.0	6
Md84K-5511			3.3	2.5	1.8	4	7	3	46.0	9
M484K-6061			2.5	2.5	1.5	32.6	∞	4	31.5	36.0
Md84K-5817	2.1		2.9	2.0	1.5	9	_	∞	36.5	40.5
Md84K-5246	5.6	1.5	3.8	3.0	2.0	7	0	1	47.0	47.0
5	1.4		2.3	1.0	1.0	0	$\overline{}$	7	29.5	30.0
V83-73	2.4	2.0	3.5	2.5	1.5	0	9	∞	43.5	43.0
-1	2 .8		3.6	3.5	1.8	9	33.5		36.5	42.0
- 1	1.9	2.3	2.5	1.5	1.3	0	9	0	29.0	36.0
- 1	2.4	2.0	3.0	3.0	1.8	4	9	9	37.5	36.5
V84-1802	2.3		2.5	3.0	1.5	9	-	9	40.5	38.5
V84-1805	2.2	2.0	2.6	2.5	1.8	38.1	_	6	39.5	42.5
V84-1049	2.3	1.8	3.0	3.0	1.5	∞	3	7	40.0	43.5
-18		2.0	3.4	3.0	2.5		33.5	1	40.0	40.5
84-1790	2.6		3°3	3.0	2 .0	2	0		37.0	0.04
Mean	2 • 3	2.0	3.1	2.6	1.7	36.5	30.7	37.3	37.6	40.3
LSD .05	5.	5.	9°	1.2	5.	4.3	NS	6.4	5.6	4.1
CV (%) 2	22.9	12.1	9.1	21.4	14.9	11.7	11.9	6.3	7.1	6.4



Seed quality (score) and seed size (g/100) of strains in Middle Atlantic Group V tests evaluated at four and three locations, respectively, in 1986. Table 15.

	Warsaw VA	17.0 13.3 16.1 19.3 16.2 22.7 16.8 16.8 16.8 17.1 17.1 13.9 14.1 19.6	17.7	4.5
Size	Orange VA	16.1 18.5 17.6 16.0 16.5 19.9 15.3 16.4 19.9 20.6 15.8 16.3 16.8 16.3 17.6	17.4	3.9
Seed	Queenstown MD	14.4 13.6 15.9 18.1 13.7 16.1 18.4 14.5 14.2 14.2 15.9 11.4 13.8 16.9	15.7	3.4
	Strain mean	15.9 16.9 18.4 15.3 17.9 20.4 20.3 20.3 21.8 19.0 16.1 17.0 13.2 14.2 16.3	16.9	1.7
	Warsaw VA $1/$	2.1 1.3 1.3 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	1.4	
	Orange VA	1122222222238 20002222222222238	1.8	.5
Seed Quality	Queenstown MD	11.7 1.6 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	2.0	5.4
S	Georgetown DE	1 1 1 2 8 8 1 1 2 1 1 1 1 1 1 1 1 1 1 1	1.7	.5
	Strain mean	1 1 1 2 2 2 2 1 1 1 2 2 2 2 2 2 2 2 2 2	1.7	23.8
	Strain	Essex Forrest V78-184 D76-8070 Md84L-5003 Md84K-5469 Md84K-5511 Md84K-5511 Md84K-5517 Wd84K-517 Wd84K-517 V83-73 V84-1751 V84-1751 V84-1750 V84-1805 V84-1805 V84-1805 V84-1805		LSD .05

1/ Seed quality scores are a composite of two replications.

Table 16. 1986 Mid-Atlantic Late Plant Test

Entry No.	Strain	Pedigree
1	Essex	
2	Union	
3	S79-4259	` Bedford x Crawford (SCN res.)
4	Md8O-IL2I	Forrest x (Bonus x Culter)
5	Md81-0884	A75-305022 x Miles
6	Md81-1331	A75-305022 x Miles
7	V78-184	V68-1034 x Essex
8	V80-3220	Essex x SRF400
9	V80-1300	Essex ³ x L73-811
10	V 83-2339	Essex x L64-1731
11	Md84C-1208	Union x Md71-1643-82
12	Md84C-1567	K1024 x Md70-1626-67
13	V83-2441	V68-1171 \times SRF400 (SMV, PMV, and PSV res.)
14	V83-2093	Forrest x V68-1171
15	V83-2075	Forrest x V68-1173 (SMV res.)
16	V83-2148	York x 22-22
17	V83-2100	Forrest x V68-1171 (SCN res.)

² locations: Warsaw, VA; Orange, VA

³ replications x 3-row plots. Planted June 20-30 to simulate double-crop conditions using a row width of 18-20 inches, 120 seeds/row.

Table 17. Mean performance of strains in Middle Atlantic Late Plant tests evaluated at two locations in 1986.

			. Pla	Plant Traits			U)	Seed Traits			
	Yield	pl	Maturity (Davs after	Lodging (score)	Height (inches)	Quality (score)	Size	Protein	$\frac{2}{\text{oil}}$	Purple	Mottled
Strain	(bu/a)	Rank	Aug. 31			(2400)	(007/6)	(9)	(0)	(8)	(%)
Essex	40.7	m	65,3	1,8	30.2	1.4	14.0	46.5	15.4	0	0
Union	31.6	13	42.5	1.0	31.2	2.1	19.4	41.3	19.2	0.0	2 4
S79-4259	25.6	17	50.8	1.3	32.3	1.8	15.3	45.8	15,3	0.0	ין ב מי
Md80-1L21	35.7	9	44.2	1,3	33.2	1.8	16.9	43.3	18.6	0.5	4
Md81-0884	33.5	11	43.7	1.2	26.0	1.9	15.8	43.4	17.7	0.7	2.7
Md83-1331	30.6	15	41.0	1.2	26.0	1.6	16.6	45.1	18.7	0.7	0.0
V78-184	42.9	۲	8.69	2.0	29.7	1.9	15.0	45.0	15.9	0.0	0.0
V80-3220	34.3	10	46.2	1.3	29.2	2.1	16.3	45.8	16.5	0.8	0.2
V80-1300	41.1	2	65.2	1.5	27.5	1.4	14.1	47.0	15.2	0.3	0.0
V83-2339	34.8	0	66.2	1.8	29.2	1.4	13.7	46.3	15.1	0.0	0.0
Md84C-1208	32.4	12	49.8	1.1	30.2	1.8	17.5	46.5	16.6	1.0	0.7
Md84C-1567	35.7	7	42.3	1.2	28.5	1.8	16.8	44.7	16.8	0.2	1.0
V83-2441	35.6	∞	47.0	1.6	34.7	1.8	19.3	46.0	15.4	0.5	0.0
V83-2093	36.4	Ŋ	63.5	2.1	29.3	1.4	14.4	44.1	16.9	0.0	0.0
V83-2075	31,3	14	69°7	2.6	29.2	1.6	13.7	44.9	16.9	0.0	0.0
V83-2148	27.0	16	46.5	1.2	26.0	1.9	17,1	45.9	16.1	0.0	0.0
V83-2100	39.1	4	2.09	1.5	30.2	1.5	16.2	41.6	20.6	0.2	6.3

1/ Data from Orange and Warsaw.

2/ Data from Queenstown.

Seed yields (bu/a), maturity (days after Aug. 31), plant lodging (score), and plant height (inches) of strains in Middle Atlantic Late Plant tests evaluated at two locations in 1986. Table 18.

train Strain Orange Warsaw Strain Orange Warsaw Strain Orange Warsaw Strain Orange Warsaw WA Mass VA WA			Yield	ž.	4	Maturity		Pla	Plant Lodging		P1	Plant Height	
40.7 40.3 41.1 65.3 67.7 63.0 1.8 2.7 1.0 30.2 32.3 2.8 13.6 31.6 26.7 50.8 56.0 45.7 1.0 1.0 1.0 30.2 32.3 28.0 34.3 1.2 1.0 1.0 31.2 28.0 34.3 1.2 1.0 1.0 31.2 28.0 34.3 1.2 1.0 1.0 31.2 28.0 34.4 44.2 46.0 45.7 1.0 1.0 31.2 28.0 32.3 28.0 1.0 31.2 31.2 28.0 32.3 31.3 31.3 31.2 31.4 44.2 44.3 1.2 1.0 26.0 24.3 1.0 20.0 24.3 1.0 20.0 24.3 31.	Strain	Strain mean	Orange VA	Warsaw VA	Strain	Orange VA	Warsaw VA	Strain	Orange VA	Warsaw VA	Strain	Orange VA	Warsa
n 31.6 31.2 32.1 42.5 46.0 39.0 1.0 1.0 30.2 32.3	ssex	40.7	40 °3	1	5	7.7	(m	1.8	i	-	1	1 (
4759 25.6 24.6 26.7 50.8 56.0 45.7 1.0 31.2 28.0 34.7 -1121 35.7 37.0 34.4 44.2 46.7 41.7 1.3 1.7 1.0 31.2 28.0 34.3 -1121 35.7 37.0 34.4 44.2 46.7 41.7 1.3 1.7 1.0 31.2 28.0 29.7 35.3 33.3 29.7 35.3 29.7 35.3 37.2 34.3 31.2 37.4 46.2 50.0 42.3 1.2 1.3 1.0 29.7 26.9 37.7 29.3 39.7 29.3 39.3 29.7 66.2 50.0 42.3 1.1 1.0 29.2 29.7 29.3 39.2 29.3 39.2 29.3 29.7 29.2 29.3 39.2 29.2 29.3 39.2 29.2 29.3 39.2 29.2 29.3 39.2 29.2 29.3 39.2 29.2 29.3	Jnion	31.6	31.2	2	42.5	. 9	39.0	0 0	7.7	1 · ·	•	7	φ.
-1121 35.7 37.0 34.4 44.2 46.7 41.7 1.3 1.7 1.0 32.3 33.3 33.9 33.5 27.4 39.5 43.7 46.0 41.3 1.2 1.2 1.3 1.0 26.0 24.3 29.7 29.8 33.5 27.4 39.5 43.7 46.0 41.3 1.2 1.2 1.3 1.0 26.0 24.3 27.2 28.3 23.3 23.3 23.2 24.3 24.3 41.0 41.7 40.3 1.2 1.2 1.3 1.0 26.0 24.3 27.2 28.3 23.2 24.3 27.4 46.2 50.0 42.3 1.3 1.7 1.0 29.2 29.3 30.0 23.3 23.0 34.8 29.9 39.7 66.2 67.3 63.0 1.5 2.0 1.0 27.5 29.0 29.2 29.3 30.0 44.3 1.3 44.3 1.1 1.0 1.2 1.2 1.3 1.0 29.2 29.0 29.0 29.0 29.0 29.0 29.0 29	79-4259	25.6	24.6	9	50.8	9	45.7	7 -	1 .0	T -		∞	4
0884 33.5 27.4 39.5 43.7 46.0 41.3 1.2 1.3 1.0 25.0 25.3 25	d80-1L21	35.7	37.0	34.4	44.2	9	41.7	1.3	1.7	1.0	, ,	2 د	S
133 30.6 26.4 34.8 41.0 41.7 40.3 1.2 1.3 1.0 26.0 24.1 27.3 27.3 27.3 27.3 27.3 27.3 27.3 27.3	1481-0884	33.5	27.4	39.5	43.7	9	41.3	1.2			° 4	2	7 1
184 42.9 40.5 45.3 69.8 75.0 64.7 2.0 2.7 1.3 29.7 25.	d83-1331	30.6	26.4	34.8	41.0	\vdash	40.3	1.2	1.3	0 0	э ч	t	- (
3220 34.3 31.2 37.4 46.2 50.0 42.3 1.3 1.7 1.0 29.7 25.3 3.0 1300 41.1 44.2 38.0 65.2 67.3 63.0 1.5 2.0 1.0 29.2 26.3 3.0 1300 41.1 44.2 38.0 65.2 67.3 63.0 1.5 2.0 1.0 29.2 26.3 3.0 2339 34.8 29.9 39.7 66.2 69.7 62.7 1.8 2.3 1.2 29.2 29.0 29.0 2-1567 35.7 34.8 36.6 42.3 44.3 1.1 1.0 1.0 1.2 29.2 29.0 29.0 2-1567 35.7 34.8 36.6 42.3 44.3 1.1 1.0 1.0 1.2 34.7 33.3 36.4 2441 35.6 30.4 40.8 47.0 51.3 42.7 1.6 2.0 1.2 34.7 33.3 36.4 2093 36.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 29.3 30.7 24.0 2005 31.3 32.9 29.7 69.7 75.0 64.3 2.6 33.3 1.8 29.2 27.7 30.2 2100 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.7 1.3 30.2 27.7 24.0 34.6 32.8 56.8 50.8 1.5 1.7 1.3 30.2 31.0 29.2 20.4 0.5 10.1 2.3 .8 1.1 .4 NS NS 5.0 11.5 11.1 29.5 28.9 30.0 20.5 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5.0 11.5 11.1 29.6 11.5 11.1	78-184	45.9	40.5	45.3	8.69	5	64.7	2.0	7.7	7	\circ	7 0	∞
1300 41.1 44.2 38.0 65.2 67.3 63.0 1.5 2.0 1.0 727.5 29.0 26.2 12.8 29.9 34.8 29.9 39.7 66.2 69.7 62.7 1.8 2.3 11.2 29.2 29.0 29.0 29.0 29.4 35.3 44.3 40.3 1.1 1.0 1.2 30.2 29.0 29.0 29.0 29.4 35.3 44.3 40.3 1.2 1.0 1.2 30.2 29.0 29.0 29.0 29.4 40.8 47.0 51.3 42.7 1.6 2.0 1.2 30.2 28.5 28.3 32.0 20.1 33.8 39.0 64.3 64.3 2.6 2.1 2.7 1.5 2.9 3.3 3.3 36.4 20.8 20.7 5.0 64.3 2.6 3.3 1.8 29.2 27.7 2.1 2.2 2.0 1.2 2.1 2.7 1.5 29.3 30.7 24.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 29.0 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.7 1.3 30.2 27.7 24.0 29.0 20.0 20.0 20.0 20.0 20.0 20.0 20	80-3220	34.3	31.2	37.4	46.2	0	42.3	1,3	1.7		n a	מ מ	0 0
2339 34.8 29.9 39.7 66.2 69.7 62.7 1.8 2.3 1.2 29.2 29.0 29.2 20.1 20.8 32.4 29.4 35.3 49.8 55.3 44.3 1.1 1.0 1.2 29.2 29.0 29.2 29.0 29.2 29.4 35.3 49.8 55.3 44.3 1.1 1.0 1.2 2.3 1.2 29.2 29.0 29.2 29.0 29.2 29.4 35.3 40.8 47.0 51.3 42.7 1.6 2.0 1.2 30.2 28.3 36.4 20.3 31.3 32.9 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.3 30.7 20.4 1.3 1.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	80-1300	41.1	44.2	38.0	65.2	7	63.0	1,5			7 6	0 0	V
C-1208 32.4 29.4 35.3 49.8 55.3 44.3 1.1 1.0 1.2 27.2 29.0 29 C-1567 35.7 34.8 36.6 42.3 44.3 40.3 1.2 1.3 1.0 28.3 30.2 28.3 35.7 24.1 35.6 30.4 40.8 47.0 51.3 42.7 1.6 2.0 1.2 34.7 33.3 36.5 29.3 30.7 28.3 35.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 29.3 30.7 28.0 29.9 24.0 69.7 75.0 64.3 2.6 3.3 1.8 29.2 27.7 24.2 1.3 32.9 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.2 1.3 3.9 1.0 20.9 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.9 1.1 29.5 28.9 30.7 29.9 24.0 40.4 53.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30.2 29.9 24.0 40.0 10.1 2.3 .8 1.1 .4 NS NS S. 20	83-2339	34.8	29.9	39.7	66.2	6	62.7	0 00	0, 0	1 t	77	2	9
C-1567 35.7 34.8 36.6 42.3 44.3 40.3 1.2 1.2 1.3 1.0 20.2 28.5 28.0 29 2441 35.6 30.4 40.8 47.0 51.3 42.7 1.6 2.0 1.2 34.7 34.3 33.3 36.4 25093 36.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 2.7 1.5 29.3 30.7 28 20093 36.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 29.3 30.7 28 2015 31.3 32.9 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.2 27.7 30 2148 27.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24 2150 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.9 1.1 29.5 28.9 30. 34.6 32.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30. 20 20 4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11.	d84C-1208	32 .4	29.4	35.3	49.8	S	44.3	1	2 -	1.2	n c	ν c	200
2441 35.6 30.4 40.8 47.0 51.3 42.7 1.6 2.0 1.2 24.7 29.3 29.3 29.3 33.3 36.9 2093 36.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 29.3 33.3 36.7 29.3 2075 31.3 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.2 27.7 29.3 2100 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.7 1.3 30.2 27.7 24.0 2100 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.7 1.3 30.2 31.0 29.5 34.6 32.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30 30.5 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 20.4 25.2 11.8 10.5 2.7 42.8 36.0 19.6 14.2 11.5 11.5	d84C-1567	35.7	34.8	36.6	42.3	4	40.3	1.2	1 1 3	7.1	2 0	0 0	7 0
2093 36.4 33.8 39.0 63.5 63.3 63.7 2.1 2.7 1.5 29.3 35.3 35.3 36.7 2.1 2.7 1.5 29.3 30.7 28 20.7 20.5 31.3 32.9 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.2 27.7 28 21.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24.0 20.3 24.0 60.7 57.7 63.7 1.5 1.5 1.7 1.3 30.2 21.0 27.7 24.0 20.3 24.0 40.1 27.7 24.0 1.5 1.2 1.3 1.0 20.5 27.7 24.0 20.3 20.3 20.3 20.3 20.3 20.3 20.3 20	83-2441	35.6	30.4	40.8	47.0	-	42.7	9) r	0 -	0 0	, 15
2075 31.3 32.9 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.3 30.7 28 2148 27.0 29.9 29.7 69.7 75.0 64.3 2.6 3.3 1.8 29.2 27.7 30 2148 27.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.0 26.0 27.7 24 2100 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.5 1.9 1.1 29.5 28.9 30 34.6 32.8 36.4 53.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30 34.6 32.8 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 % 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11	83-2093	36.4	33.8	39.0	63.5	س ا	63.7	2 - 6		1.6	+ 0	7	9
2148 27.0 29.9 24.0 46.5 52.0 41.0 1.2 1.3 1.8 29.2 27.7 30 24.0 39.1 33.9 44.4 60.7 57.7 63.7 1.5 1.5 1.7 1.3 30.2 27.7 24 24 25.0 30.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	33-2075	31,3	32.9	29.7	69.7) L	66. 2	7 0 0		1.0	20 1	0	∞
2100 39.1 33.9 44.4 60.7 57.7 41.5 1.5 1.0 26.0 27.7 24 34.6 32.8 36.4 53.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30 .05 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 %) 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11.	83-2148	27.0	29.9	24.0	46.5) (7 -		χ,	δ,	_	0
34.6 32.8 36.4 53.8 56.8 50.8 1.5 1.9 1.1 29.5 28.9 30 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 %) 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11	-2	39.1		7- 77	60.7	1 1	4 ~	1 ° 1		1.0	9	7	4
34.6 32.8 36.4 53.8 56.8 1.5 1.9 1.1 29.5 28.9 30 .05 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 %) 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11			ì	٠		- 1	n	C•1	•		0		6
.05 8.7 NS 7.1 6.9 10.1 2.3 .8 1.1 .4 NS NS 5 (%) 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11	ean	34.6	32.8	36.4	53.8	9	50 . 8	1.5	1.9	1.1	29.5		30.2
(%) 20.4 25.2 11.8 10.5 10.7 2.7 42.8 36.0 19.6 14.2 11.5 11		8.7	SN	7.1	6.9	10.1	2.3	∞.	1.1	7.	SN	SN	6
7. 2.1 13.5 11.5	(%) ^	20.4	25.2	11.8	7.	7 01	,	C		· ·			
			7967	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C • O •	10 • /	1 • 7	7	36.0	19.6	14.2	11.5	11.1

			-

Table 19. Seed quality (score) and seed size (g/100) of strains in Middle Atlantic

Late Plant tests evaluated at two locations in 1986.

		Seed Qual	ity		Seed Siz	ze
Strain	Strain mean	Orange VA	Warsaw VA 1/	Strain mean	Orange VA	Warsaw VA
Essex	1.4	1.5	1.2	14.0	14.7	13.4
Union	2.1	2.2	1.8	19.4	20.6	18.1
S79-4259	1.8	1.8	1.5	15.3	15.8	14.7
Md80-IL2I	1.8	1.8	1.5	16.9	17.8	16.0
Md81-0884	1.9	2.2	1.2	15.8	16.7	15.0
Md83-1331	1.6	1.7	1.5	16.6	17.7	15.4
V78-184	1.9	2.2	1.0	15.0	15.7	14.3
V80-3220	2.1	2.2	2.0	16.3	17.0	15.7
V80-1300	1.4	1.5	1.0	14.1	14.9	13.3
V83-2339	1.4	1.5	1.0	13.7	14.7	12.6
Md84C-1208	1.8	1.8	1.8	17.5	18.1	16.9
Md84C-1567	1.8	1.7	2.0	16.8	16.9	16.7
V83-2441	1.8	1.8	1.8	19.3	19.9	18.7
V83-2093	1.4	1.5	1.0	14.4	15.1	13.6
V83-2075	1.6	1.8	1.0	13.7	14.9	12.4
V83-2148	1.9	1.8	2.2	17.1	18.5	15.8
V83-2100	1.5	1.7	1.2	16.2	15.8	16.6
Mean	1.7	1.8	1.4	16.0	16.7	15.2
LSD .05	NS	•5	-	1.3	1.0	1.4
CV (%)	20.4	15.6	-	6.7	3.7	5.6

¹/ Data from one replication.





